

Illinois Environmental Protection Agency
Bureau of Air, Permit Section
June 2003

Response to Comments :

**Proposed Revision of the Construction Permit for
Turbine 3 at the Rockford Energy Center**

Construction Permit: 0010077

General

- 1. We are opposed to the issuance of a revised construction permit for Turbine 3. This is because it would allow more emissions and because we believe that the Illinois EPA's response to a violation of a permit condition, which is the reason NRG has requested a revised permit, has been inadequate.**

Response: NRG's request for revision of the construction permit for Turbine 3 meets the legal standards for issuance of a revised permit. General concerns about increased emissions are not a basis to deny the request. With the revised particulate emissions limitation that NRG has requested, particulate emissions from Turbine 3 would still comply with applicable emission standards and regulations and, based on the update to the dispersion modeling in the original application, would not threaten ambient air quality. Concerns about the adequacy of an associated enforcement action are also not a legal basis for the Illinois EPA to deny NRG's request for a revised permit.

Response To Violations By Turbine 3

- 2. Indeck knowingly ran Turbine 3 at the Rockford Energy Center in violation of a condition in its construction permit. The Illinois EPA should have immediately issued a Notice of Violation when exceedances of a permit condition were identified.**

Response: Available information indicates that Indeck did not knowingly run Turbine 3 in violation of a permit condition. The circumstances of Turbine 3 at the Rockford Energy Center were not a result of poor design, faulty construction, or improper operation of the turbine. Indeed, the turbine burns natural gas, which is the cleanest commercially available fuel. The circumstances were a consequence of the particulate matter emission data in the permit application that was the origin of a permit condition limiting the particulate matter emissions of Turbine 3. In particular, the application data did not account for condensable particulate matter.

The deficiencies in the application data were identified after emission testing was performed for Turbine 3 when the Illinois EPA reviewed the test results. The test results

showed particulate matter emissions higher than the hourly limitation set by the construction permit. While the measured emissions exceeded the permit limitation, the higher levels of emissions did not violate any applicable emission standards or control technology requirement. They also did not have other regulatory consequences for the turbine, such as triggering the applicability of the PSD regulations for the turbine. Thus the higher levels of emissions could be addressed by revision or correction of the relevant permit limitation. In this regard, if Indeck had originally requested to be permitted at the higher level of particulate emissions, the initial construction permit would have had a limitation set at that level.

By way of further background, NRG has explained that the application for Turbine 3 included hourly particulate matter emission data, which had been provided by the manufacturer of the turbine. However, this data addressed only filterable particulate and did not address condensable particulate. Thus the hourly particulate limitation set by the permit, which echoed the emissions data provided in the application, failed to adequately account for condensable particulate matter. This discrepancy was revealed after construction was complete and particulate matter testing was performed for Turbine 3. As part of the testing of Turbine 3, measurements were performed for both filterable and condensable emissions. Review of the test results showed that the measured filterable emissions by themselves complied with the limitation set in the permit. However, the total particulate emissions from the turbine were higher than the hourly limitation, which had been set based on data for only filterable emissions. NRG became aware of this problem when the Illinois EPA notified it that the permit limitation for particulate applied to the total of both filterable and condensable particulate.

3. NRG Rockford is a scofflaw, as it has operated Turbine 3 in flagrant violation of the particulate matter limitation set in the construction permit for Turbine 3.

Response: This allegation is not supported by the chronology of events for Turbine 3. The Rockford Energy Center is a peaking plant and the turbines routinely operate only in the summer. In November 2002, when the Illinois EPA informed NRG that the particulate limitation for Turbine 3 addressed total particulate matter, Turbine 3 was not operating. Turbine 3 had ceased operation for 2002 in September. In 2003, NRG indicates that to date Turbine 3 has only operated a few times for purposes of warranty provisions, each time for less than an hour.

In addition, after being contacted by the Illinois EPA, NRG promptly applied for a revision to the construction permit for Turbine 3. As NRG applied for a revised permit, the Illinois EPA did not have to prepare a Violation Notice requiring NRG to submit a plan to resolve the compliance status of Turbine 3. Finally, NRG and the Illinois EPA have pursued this revision to the permit on a schedule that would allow it to be completed before the start of the 2003 summer peaking season.

4. Other new peaker plants have been issued Notices of Violation for construction permit violations.

Response: In the judgment of the Illinois EPA, the particular circumstances of Turbine 3 at the Rockford Energy Center did not warrant issuance of a Violation Notice. Even though tested particulate matter emissions were higher than the permit limitation, emissions did not violate any emission standards or have other regulatory consequences. Given the nature of the permit limitation at issue, it was immediately apparent that the situation could be readily addressed by a revision to the limitation.

If the circumstances had been different, a Violation Notice might have been issued to the Rockford Energy Center. For example, if the permit had been a PSD Permit and the particulate limitation had embodied a determination of Best Available Control Technology under the PSD rules, a Violation Notice would certainly have been issued. Likewise, the circumstances at other peaker plants that have been issued Violation Notices have been of greater consequence than these at the Rockford Energy Center.

In addition, if a similar set of circumstances arises in the future at another new peaker plant, a Violation Notice could very well be issued. The events at the Rockford Energy Center should not be considered to indicate what will be accepted in the future, but should be taken by other new plants as an official warning that they must adequately account for condensable particulate.

5. The Illinois EPA should seek penalties from NRG Rockford. The Illinois EPA has repeatedly said that no source can benefit from violating permit conditions or regulations. The public expects the Illinois EPA to assess appropriate fines for violators.

Response: It is not appropriate for the Illinois EPA to respond in detail to these specific comments as they concern a particular enforcement decision made for the Rockford Energy Center. Effective enforcement by any governmental authority demands the ability to exercise judgment and discretion. The effectiveness of the Illinois EPA's enforcement activity would be compromised if specific details of enforcement deliberations were made publicly available.

Nevertheless, as should be apparent from the description of events at the Rockford Energy Center, NRG did not save money during the construction and operation of Turbine 3 by failing to make expenditures that were needed for compliance. That is, the turbine was properly designed and equipped, the turbine was properly operated and maintained, and the turbine was fired with natural gas, the appropriate fuel. NRG did not save money by installing a less than adequate turbine, failing to maintain the turbine, or using a cheaper fuel than natural gas. Rather the exceedances of the particulate limitation by Turbine 3 arose from a deficiency in the data supplied in the construction permit application and the subsequent use made of that data by the Illinois EPA. Thus the cause of any violations was of an administrative nature.

As such, it is difficult to assess the economic benefit, if any, that NRG/Indeck experienced from the deficiency in the original application. It is also difficult to see how a penalty would serve to discourage other lapses in emission data in an application that has already been submitted. Given the administrative nature of the underlying violation, the Illinois EPA was clearly entitled to exercise judgment, considering the consequences of the lapse, in deciding whether to pursue an administrative-type penalty. In this case, by not issuing a Violation Notice, the Illinois EPA elected not to pursue a penalty.

6. **We believe that the Illinois EPA's handling of the exceedances at the Rockford Energy Center, which was developed and is still operated by Indeck Energy Corporation, has been improperly influenced by political support for a coal-fired power plant that Indeck Energy is proposing to build near Elwood, Illinois.**

Response: This is not true. The decisions about the Rockford Energy Center were made based on the circumstances of Turbine 3, independent of any implications or consequences for Indeck's application for a proposed coal-fired power plant. Certainly, the staff that reviewed the test data for Turbine 3 did not consider the fact that Indeck Energy Corporation had submitted a construction permit application for a new coal-fired power plant in Elwood, which is south of Joliet, almost 80 miles from Rockford.

If the Illinois EPA was being influenced in the manner suggested by this comment, a revised construction permit could have been issued without opportunity for public comment. Alternatively the public comment period could have been scheduled sooner, without combining it with the public comment period for the draft CAAPP permit for the Rockford Energy Center. Instead, the Illinois EPA has processed the request for a revised permit in due course with opportunity for public comment and in a manner that was most efficient for the Agency.

Particulate Matter Emissions of Turbines 1 and 2

7. **It is very likely that Turbines 1 and 2 also do not meet the particulate matter limitations in their construction permit. These turbines are almost identical to Turbine 3 and each is limited to 10 pounds of particulate matter per hour by their construction permit. Indeck should be required to perform emission testing for Turbines 1 and 2.**

Response: The circumstances of Turbines 1 and 2 and Turbine 3 are not the same. While they are similar units, the capacity of Turbines 1 and 2 is about 10 percent less than the capacity of Turbine 3. In addition, the particulate matter emissions of Turbines 1 and 2 are limited to 10 pounds per hour, rather than 6 pounds per hour like Turbine 3. (In this regard, it appears that Indeck obtained more exact data for particulate matter emissions for Turbine 3 from the manufacturer. However, the narrow scope of this more exact data, as it did not consider condensable particulate, was not recognized.)

The test data for Turbine 3 does not indicate that Turbines 1 and 2 have total particulate matter emissions that are greater than 10 pounds per hour. This testing was actually conducted at three different operating loads. The total particulate matter emissions of Turbine 3 were less than 10 pounds when the turbine was operating at low and intermediate load. The intermediate load at which Turbine 3 was tested, 155 MW, is representative of the full load of Turbines 1 and 2. Thus, the relevant test data from Turbine 3 indicates that particulate matter emissions of Turbines 1 and 2 comply with the limitation set in their construction permit.

In any event, in response to this comment, NRG applied for a revision to the construction permit for Turbines 1 and 2 to increase the particulate matter limitation for these units. The request was conservatively made by NRG assuming that the test results for Turbine 3 at full load would also be representative of full load operation of Turbines 1 and 2. NRG states that this request was submitted as a protective measure to eliminate any further questions on the compliance status of these other turbines.

In response to NRG's request, the Illinois EPA has issued a revised construction permit for Turbines 1 and 2 that raises the particulate limitations for these units. This avoids the need to conduct testing of the particulate matter emissions for these turbines. The Illinois EPA did not hold another public comment period for this revision. The regulatory issues and concerns posed by this revision are similar to those that were posed for the revision for Turbine 3, which the Illinois EPA has already provided opportunity for public comment and fully addressed. In addition, this revision was triggered by a comment made during the public comment period for Turbine 3.

Adequacy of Public Notice

- 8. There is information that indicates that people living near the Rockford Energy Center have concerns about its operation. When a peaker plant was proposed for Round Lake in the fall of 2001, some residents of Round Lake conducted a survey of people living near this source. The problems that were identified in this survey included excessive noise, small explosions, 2 A.M. "steam whistles," Indeck's unresponsiveness to complaints, and unidentified powdery deposits on cars and outdoor furniture. Because of this, the Illinois EPA should have scheduled a public hearing as part of the comment period on the revision of the construction permit for Turbine 3.**

Response: The Illinois EPA did hold a public hearing on the original issuance of the construction permit for Turbine 3. No local residents attended that hearing. Given the fact that no local residents attended that hearing and current budget constraints, it would have been ill-advised for the Illinois EPA to have scheduled a public hearing on the proposed revision to the construction permit. Indeed, only two environmental organizations, both based in the Chicago area, submitted written comments on the

revision of the construction permit for Turbine 3 and the draft CAAPP Permit for the Rockford Energy Center. Local residents did not submit any written comments.

Moreover, given the presence near the Rockford Energy Center of other sources, it is very likely that the problems reported in the Round Lake survey were actually unrelated to the Rockford Energy Center. The two turbines at the source in 2001 each ran for less than 200 hours, consistent with the source's role as a peaker plant operating when other sources are unable to meet the demand for electric power. Thus concerns expressed by local residents about noise were likely attributable to activities at other sources, including sources that routinely operate during nighttime hours. The powdery deposits are clearly attributable to another source or activities in the area as gas-fired turbines do not leave powdery deposits on surfaces as described by local residents.